

# Perianal abscess in children

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The records of 16 children presenting with a diagnosis of perianal abscess, over a 5-year period, were reviewed. The clinical and microbiological features of paediatric perianal abscesses are similar to those found in adults, although the incidence of associated diseases is higher in paediatric patients. Perianal abscesses in children are best treated by incision and drainage. The presence of an underlying contributing disease should be excluded.

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Perianal abscesses in children are rare. The perianal abscesses of children treated in a district general hospital over a 5-year period are reviewed.

## Patients and methods

The medical records of all children, aged 12 years or under, admitted with a diagnosis of perianal abscess between 1986 and 1990 were reviewed. Patient details including age, sex, pathology, treatment and outcome were recorded.

## Results

### Sex and age

A total of 16 records were retrieved, 14 boys and 2 girls. Their ages ranged from 3 months to 12 years (median 5

years). Six children, all male, were under the age of 18 months.

### Treatment

All patients underwent surgery, two requiring two procedures and 14 requiring one. The initial treatment was conservative in two, one was treated with oral antibiotics, the other abscess burst shortly before attendance, and surgical in 14. Eight patients underwent incision and drainage alone and four incision, drainage and laying open of a fistula tract. Both abscesses treated conservatively recurred, each subsequently requiring surgical treatment.

Two patients received antibiotics, one because of congenital agranulocytosis and the other as an adjuvant to surgical treatment.

Two patients required a second operation to lay open a fistula in ano. Satisfactory healing was achieved in all except one child who was found to have Crohn's disease.

### Pathology

All abscesses were classified as perianal by the operating surgeon, there were no ischiorectal abscesses. The six fistulas were all low.

Results of microbiological analysis were available for 12 patients. Culture of the pus grew 'gut' organisms (1) in 10, skin organisms in one and no growth in one.

Five patients had a concomitant problem. Two had *Enterobius vermicularis* infestation, one had congenital agranulocytosis, one had chicken pox, and one had Crohn's disease. The child with Crohn's disease had not been diagnosed prior to attendance. The diagnosis was suggested after histological examination of the abscess

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wall and fistula tract, which had been laid open. Subsequent investigation showed that he had extensive small intestinal Crohn's disease. The wound took 2 years to heal.

## Discussion

Anorectal abscesses are thought to be a common problem in paediatric practice (2–4). However, in a district general hospital serving a resident population of 330 000 only 16 such abscesses have been treated in a 5-year period. The condition should be considered rare.

In our series there was a marked preponderance of male patients (14/16), all children below the age of 2 years were male. Estimates of the proportion of males have varied between 55% (2) and 79% (3). This mirrors adult perianal abscesses where the predominance of male patients is well-documented (5).

The pathogenesis of anorectal abscesses in children is obscure. A variety of theories have been proposed for the adult disease, including infection arising from anal fissures or minute anal canal abrasions and intersphincteric sepsis in the anal glands. In children it has been suggested that fistula in ano may arise as a result of infection of either congenital sinuses leading into the perianal tissue from the anal canal (6) or abnormally wide crypts of Morgagni (7).

The incidence of underlying disease in adults with anorectal sepsis is approximately 10% (8). Up to 52% (4) of children with anorectal abscesses have an underlying disorder. A variety of neoplasms, Hirschsprung's disease, immune deficiency syndromes, diabetes mellitus and inflammatory bowel disease have all been described. Previously reported series have been from specialist paediatric centres, probably accounting for the frequency and severity of concomitant disorders (2–4). Of our patients, 5/16 had a second disease process. One child had congenital agranulocytosis, one had chicken pox, two were infested with *Enterobius* and one had Crohn's disease. It is important to note that the child with Crohn's disease presented with an abscess that had no unusual features. The diagnosis was made on histological examination of a biopsy of the wall of the abscess cavity. Perianal sepsis is a well-known association of Crohn's disease in children (9). The association of *Enterobius* infestation and anorectal abscess has been reported in one patient previously (10).

The bacteriology of the abscesses of our patients is similar to that described by Brook and Martin (11), who felt that the majority of lesions contain a mixed population of anaerobic and aerobic organisms.

All of our patients required surgical treatment. Incision and drainage should be the treatment of choice for established anorectal sepsis in children. Pus should be sent for culture and abscess wall for histological examination. Approximately one-third of paediatric perianal abscesses, in other series (2–4) and our own, are complicated by the presence of a fistula; a similar proportion to the adult disease (5). Definitive fistula surgery should be

carried out by an experienced surgeon once the acute sepsis has settled, when the anatomy of the anal musculature may more easily be defined.

The place of antibiotic therapy as an adjuvant to incision and drainage is unclear. All the wounds in our series, apart from the child with Crohn's disease, healed satisfactorily, although only two children received antibiotics. It is difficult to justify the use of antibiotics routinely. Their use should be limited to the treatment of children with impaired resistance to infection.

Previous reports have suggested that paediatric anorectal sepsis is dissimilar to the adult condition (2–4). Our data shows that the sex distribution, microbiology and incidence of fistula is similar in both age groups. However, a greater proportion of children with perianal sepsis have an associated underlying disease.

In conclusion, we feel that anorectal abscesses in children should be treated by surgical drainage without delay. A proportion of abscesses treated by simple drainage will be complicated by fistula formation. These fistulas may safely be laid open at a second procedure. The association between anorectal abscesses and underlying disease should be considered.

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